

Aero Design Ltd.**Work Order Control Sheet**Work Order#: 2016-91 Date Opened: 05 July 2016 Title: FabricationAircraft OEM: Robinson Aircraft Model: R44 Product Type: Cargo Basket and lid Product Model: LH Standard Quantity: 3**Work Order Contents**

Work Order/Build Sheets (Procedures Provided)
Additional Work Sheets (Standard Practice)
Drawings (See List Below)
Parts Distribution Sheet
Sub Component Tags
Completed Certification (Original)
Time Sheet (R&D)
Notes

Initial or N/A

DB
N/A
DB
DB
N/A
JC
N/A
N/A

Build Sheet Contents

Tasks Initialled
Dual Inspections Initialled

Initial or N/A

JC
JC

Drawing List

Drawing #	Rev #	Description	Initial or N/A
90611	1	Body	DB
90612	1	Lid	DB
90621	1	Aft Attach hoop	DB
90622	1	Forward Attach hoop	DB
49210	2	Hoop	DB
84262	2	Basket Handle Prov.	DB
94263	0	Lid Handle Prov.	DB

Traveller

Initial or N/A

Component Completion

Quantity Complete on This Work Order
Quantity Incomplete on This Work Order
Further Processing Required Before Release
Release to Stock as Components

As Instructed

2
N/A
N/A
N/A

Certification

Form One Completed
Serviceable (Green) Tag Completed
In Process (Yellow) Tag Completed
Unserviceable (Red) Tag Completed
Parts Tracking (White) Tag Completed
Parts Placed in Stores for Distribution

Initial or N/A

N/A
JC
JC
N/A
N/A
JC

Additional Documentation

Documentation of a minor change
Non-Conformance Report Required
Service Difficulty Report Required

Initial or N/A

N/A
N/A
N/A

Billing

Local (Aero Design)
Research and Development
Third Party

Initial or N/A

JC
N/A
N/A

+1 AFT ATTACH HOOP 90621-01-02
+1 FWD ATTACH HOOP 90622-01-02

Work performed by:

Print: D. BartfaiSign: [Signature]SCA: AD07Date: 29-Mar-17

ICC / Dual Inspection performed by:

Print: J. ClarkeSign: [Signature]SCA: AD02Date: 30-Mar-17

Work Order closed by:

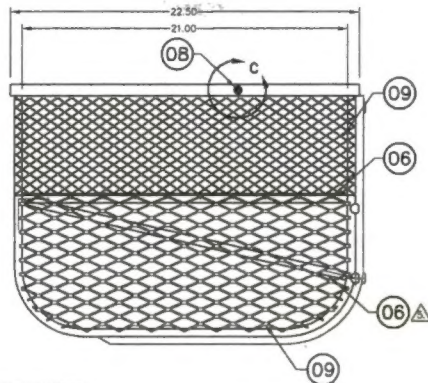
Print: J. CLARKESign: [Signature]SCA: AD02Date: 18 May 2018

Approved Manufacturing Facility 73-04

Form 20.D.03

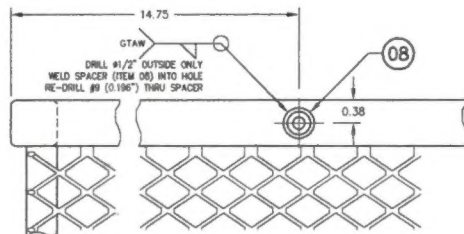
Rev. Original 23 Sep 2014

2016-91 x 3



NOTES:

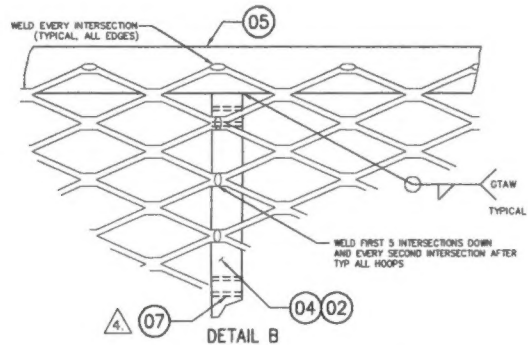
2. REMOVE ALL BURRS AND BREAK SHARP EDGES
1. PRIOR TO WELDING, DRILL 30 VENT HOLES IN ASSEMBLY FOR VENTING OF WELD GASES. WHEN ASSEMBLY IS COMPLETE, FILL ALL VENT HOLES WITH ROBERTS WELD. WELDING OF 4130 STEEL TO BE COMPLETED TO AMS 2800C, 4130 AND 1018 STEEL: WELDING ROD SHALL CONFORM TO ER70S-2 OR EQUIVALENT. STAINLESS AND 4130 STEEL: WELDING ROD SHALL CONFORM TO ER308L OR EQUIVALENT.
- ▲ INSTALL ITEM 7 (HANDLE BRACKET ASSEMBLY) IN ACCORDANCE WITH AERO DESIGN LTD. DRAWING 84262
- ▲ TYP 2 PLACES
6. STRUT MEMBER ON FWD END OF BASKET ONLY
6. THOROUGHLY CLEAN AND POWDER COAT BASKET SUB-ASSEMBLIES PRIOR TO ASSEMBLY.



DETAIL C

SCALE 1:1

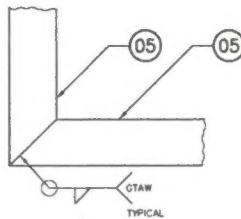
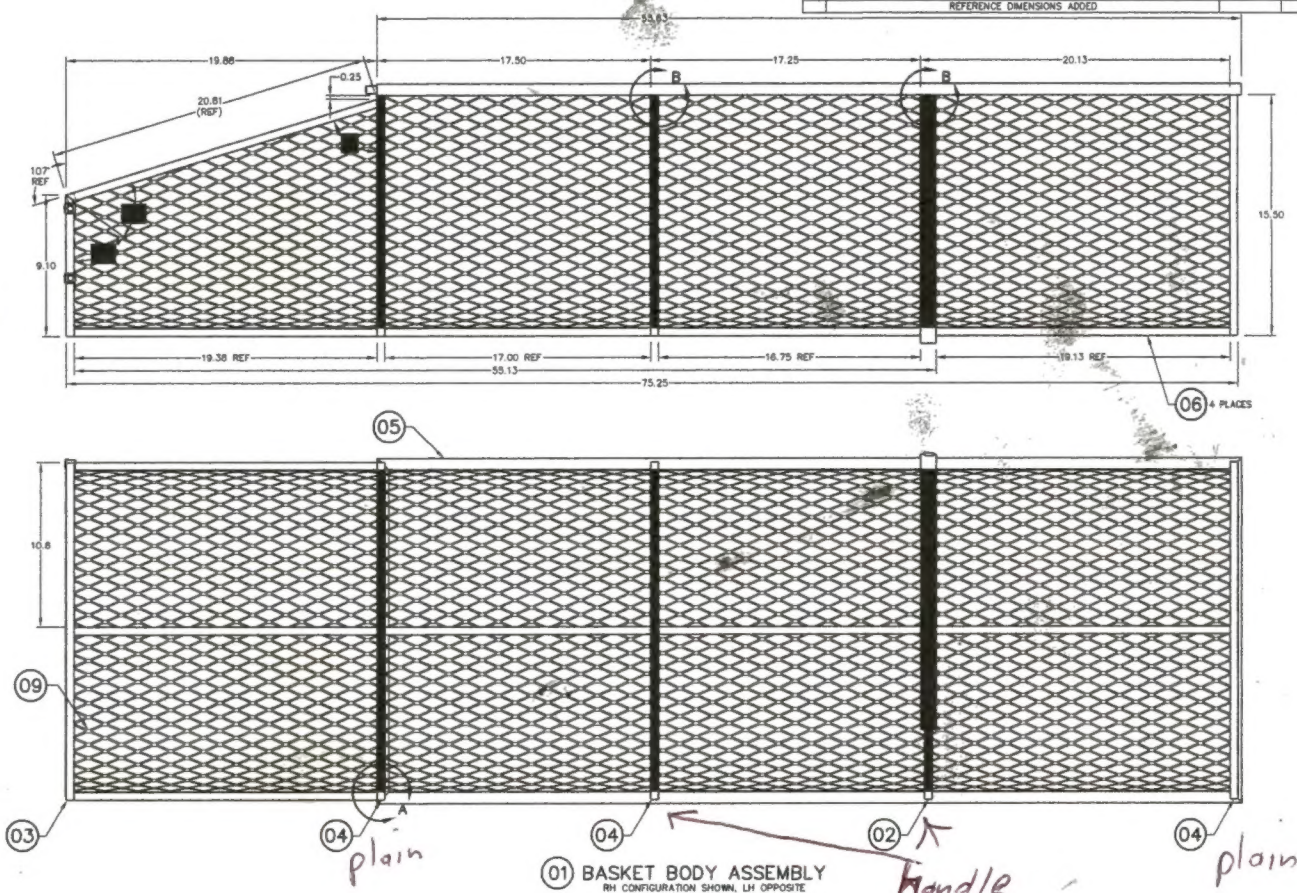
VIEW LOOKING AT FRONT RIM OF BAKSET



DETAIL 6

SCALE 1-5

VIEW LOOKING AT INNER SURFACE OF BASKET, OUTBOARD SIDE



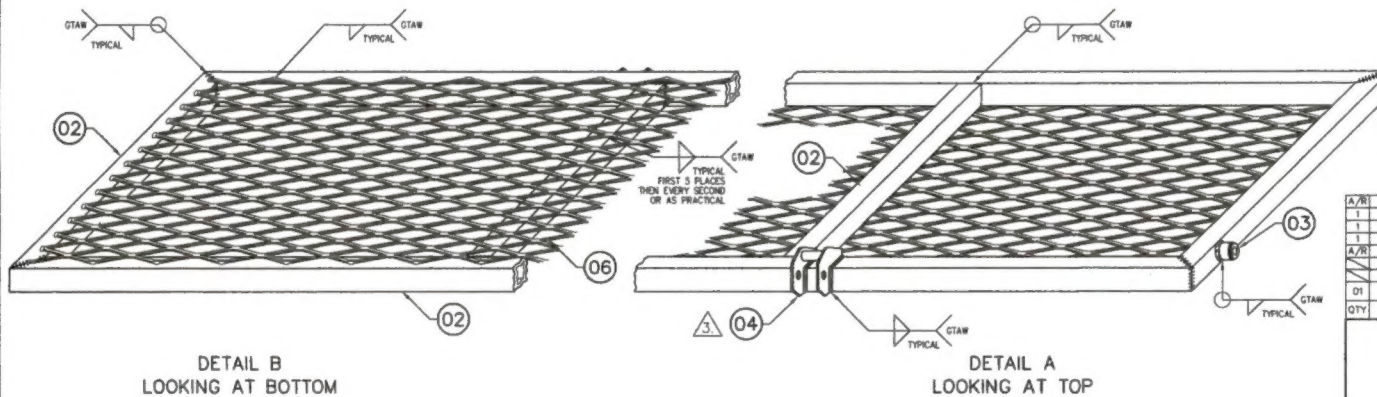
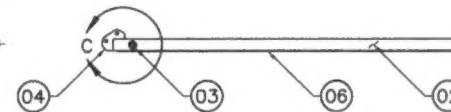
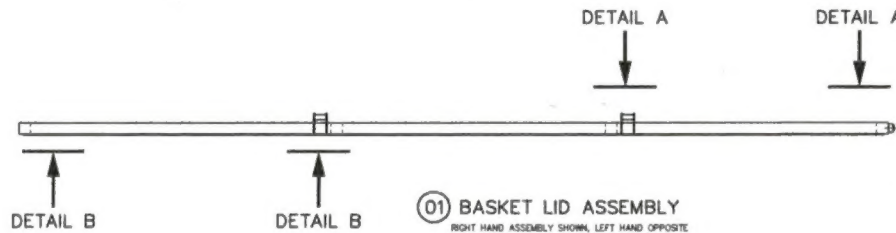
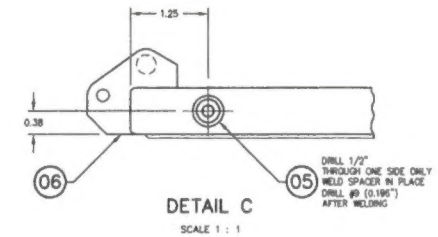
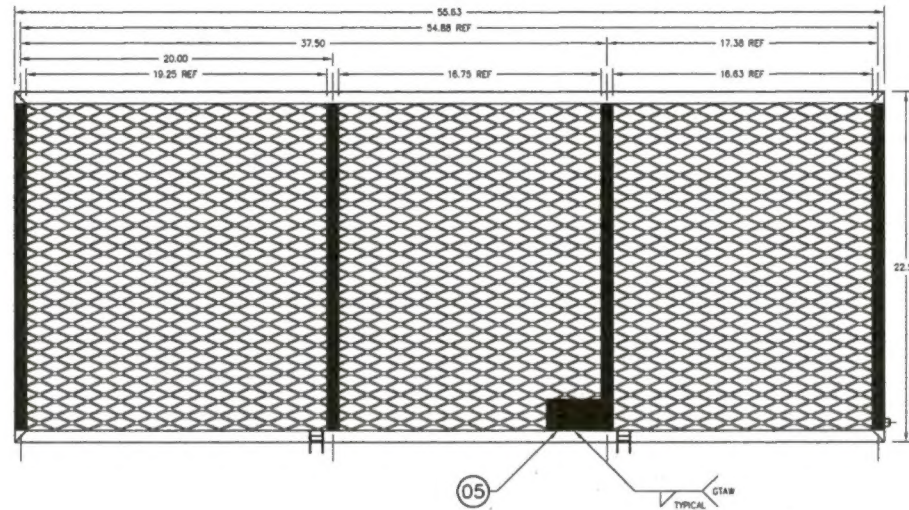
DETAIL A

SCALE 1-1

[illegible]

2016-91 x 3

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REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE		
1	TITLE BLOCK UPDATED: 84262 CHANGED TO 84263, WELDING ROD UPDATED:	BJC	21/05/2014
2	# OF WELDS DOWN BRACE TUBES INCREASED: REFERENCE DIMENSIONS ADDED		

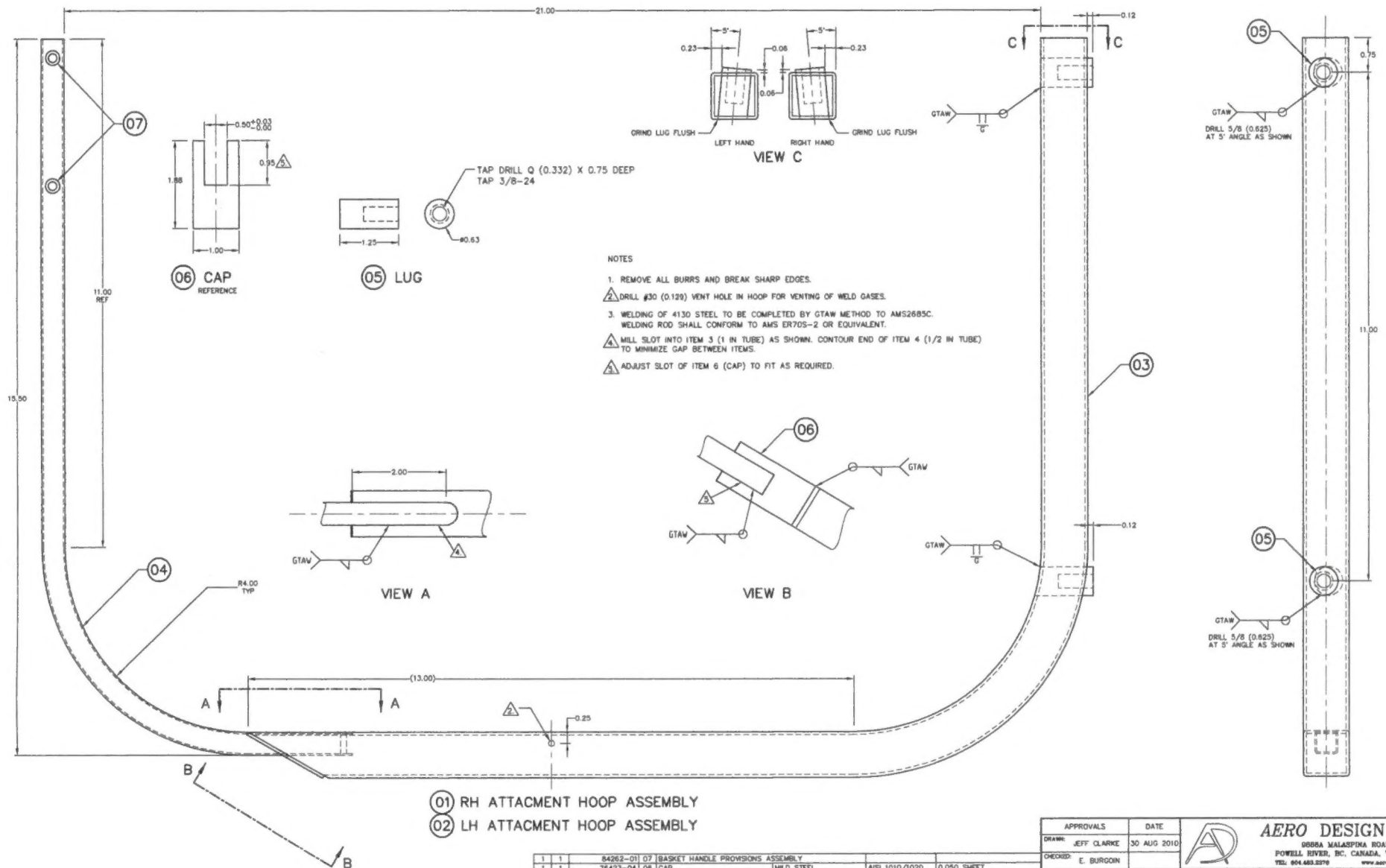


- NOTES:
1. REMOVE ALL BURRS AND BREAK SHARP EDGES
 2. WELDING OF 4130 STEEL TO BE COMPLETED BY GTAW METHOD TO AWS 2685C. 4130 AND 1018 STEEL: WELDING ROD SHALL CONFORM TO ER70S-2 OR EQUIVALENT. STAINLESS AND 4130 STEEL: WELDING ROD SHALL CONFORM TO ER308L OR EQUIVALENT.
 3. INSTALL ITEM 4 (HANDLE BRACKET ASSEMBLY) IN ACCORDANCE WITH AERO DESIGN LTD. DRAWING 84263 TYP 2 PLACES.
 4. WHEN ASSEMBLY IS COMPLETE, FILL ALL VENT HOLES WITH ROSETTE WELD.
 5. THOROUGHLY CLEAN AND POWDER COAT BASKET SUB-ASSEMBLIES PRIOR TO ASSEMBLY.


A/R	3/4-16F	06	MESH				
	30204-10	03	PLACARD BRACKET				
1	84263-01	04	LID HANDLE PROVISIONS ASSEMBLY				
1	49216-01	03	SPACER				
A/R	--	02	TUBE	4130 STEEL, COND. N	MIL-T-8736	0.75 X 0.035 SQR. TUBE	
	90612-01-02	01	BASKET LID ASSEMBLY (LEFT HAND)				
	90612-01-01	01	BASKET LID ASSEMBLY (RIGHT HAND)				
01	PART NO.	ITEM	DESCRIPTION	MATERIAL	MATERIAL SPEC	STOCK SIZE	
QTY	LIST OF MATERIALS						
APPROVALS				DATE			
DRAWN: JEFF CLARKE				03 SEPT 2010			
CHECKED: E. BURGOIN							
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ON:				ROBINSON R44, R44 II QUICK RELEASE CARGO BASKET BASKET LID FABRICATION			
DECIMALS		ANGLES		DWG. SIZE		DWG. NO.	
X.XXX ±0.010		±1/2"		SCALE 1 : 4		REV.	
X.XX ±0.03				SHEET 1 OF 1			
X.X ±0.1				A1		90612	
						1	

2016-91 x 3

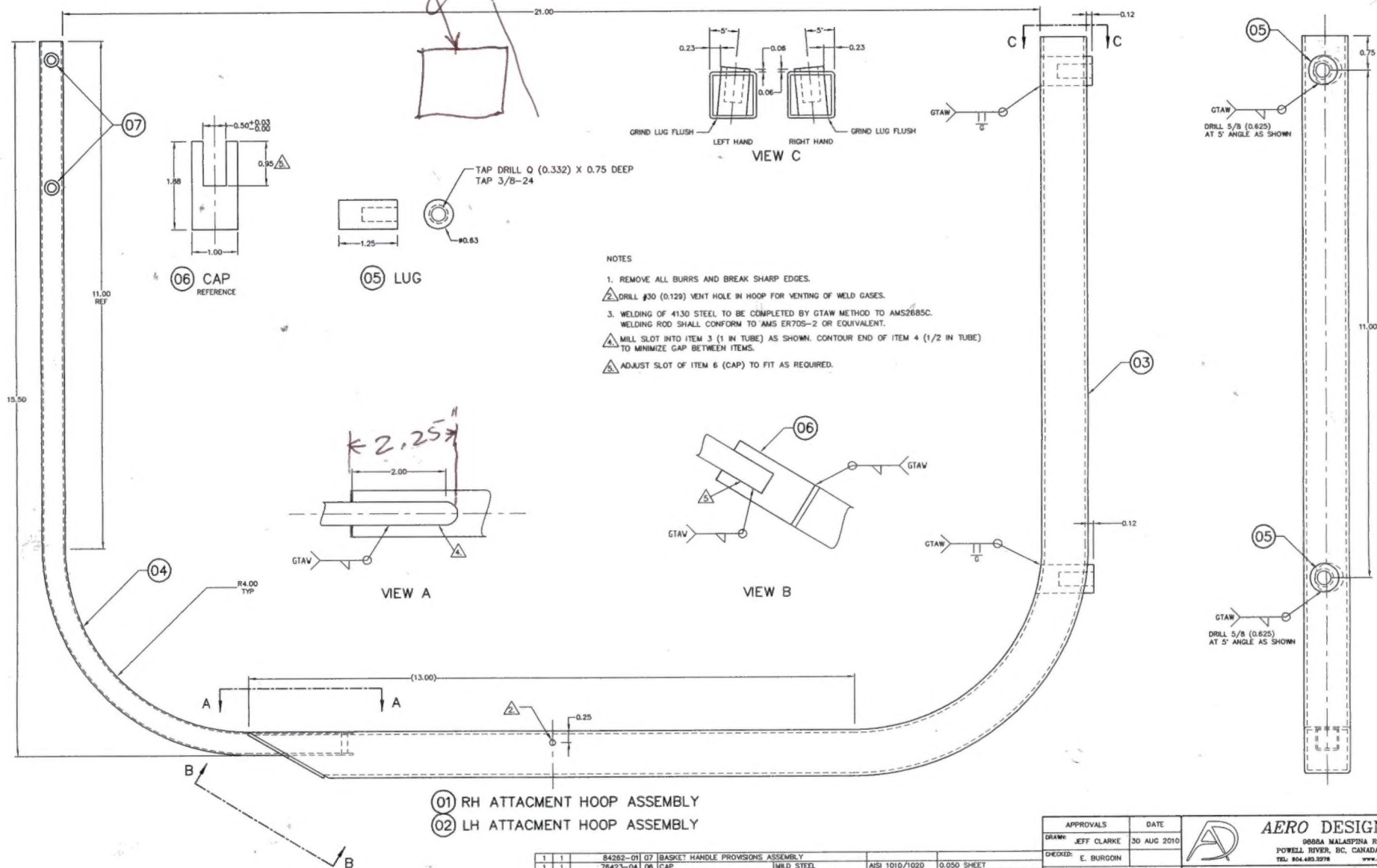
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REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE		
1	TITLE BLOCK UPDATED; HANDLE PROVISIONS ADDED; CAP P/N UPDATED	BJC	28/05/2010




QTY	QTY	PART NO.	ITEM	DESCRIPTION	MATERIAL	MATERIAL SPEC	STOCK SIZE
1	1	84262-01	07	BASKET HANDLE PROVISIONS ASSEMBLY	MILD STEEL	AISI 1010/1020	0.050 SHEET
1	1	76423-04	06	CAP	MILD STEEL	AISI 1010/1020	5/8 DIA ROD
2	2	90621-04	05	LUG	4130 STEEL COND. N	MIL-T-6736	1/2 X 0.035 SOR TUBE
A/R	A/R		04	TUBE 1/2IN	4130 STEEL COND. N	MIL-T-6736	1 X 0.065 SOR TUBE
A/R	A/R		03	TUBE 1IN	4130 STEEL COND. N	MIL-T-6736	1 X 0.065 SOR TUBE
1	1	90621-01-02	02	LH AFT ATTACHMENT HOOP ASSEMBLY			
1	1	90621-01-01	01	RH AFT ATTACHMENT HOOP ASSEMBLY			

APPROVALS		DATE	
DRWN:	JEFF CLARKE	30 AUG 2010	
CHKD:	E. BURGOIN		
<div><div>AERO DESIGN LTD. 6088A MALASPINA ROAD POWELL RIVER, BC, CANADA, V8A 0G3 TEL: 804.483.3276 www.aerodesign.ca</div></div>			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES OR ANGLES		ROBINSON R44 QUICK RELEASE CARGO BASKET AFT ATTACHMENT HOOP FABRICATION	
DECIMALS		ANGLES	
X.XXX ±0.010		±1/2°	
X.XX ±0.03			
X.X ±0.1			
SCALE 1:1	DRW. SIZE	DRW. NO.	REV.
SHEET 1 OF 1	A1	90621	1

REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE		
1	TITLE BLOCK UPDATED; HANDLE PROVISIONS ADDED; CAP P/N UPDATED	BJC	22/05/2014

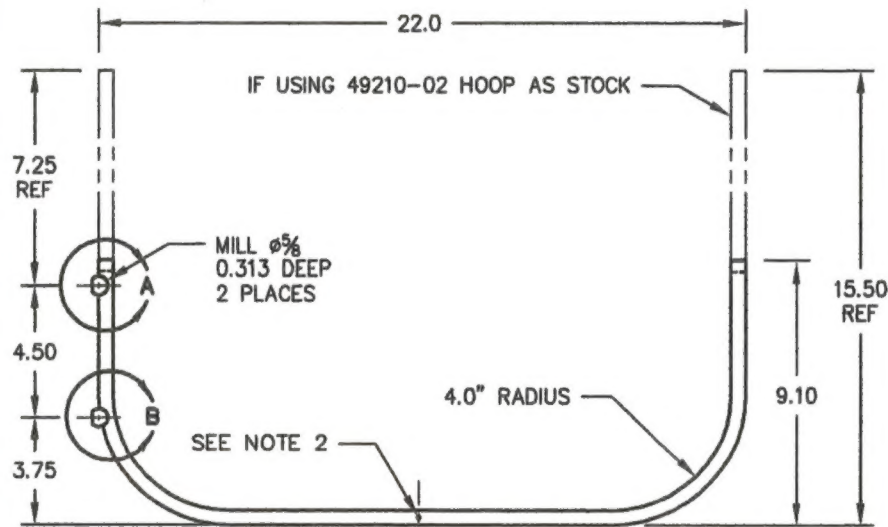


1	1	84262--01	07	BASKET HANDLE PROVISIONS ASSEMBLY			
1	1	76423-04	06	CAP	MILD STEEL	SAISI 1010/1020	0.050 SHEET
2	2	90621-04	05	LUG	MILD STEEL	SAISI 1010/1020	5/8 DIA ROD
A/R/A/R			04	TUBE 1/2IN	4130 STEEL COND. N.	MIL-T-6736	1/2 X 0.035 SDR TUBE
A/R/A/R			03	TUBE 1IN	4130 STEEL COND. N.	MIL-T-6736	1 X 0.065 SDR TUBE
		90621-01--02	02	LH AFT ATTACHMENT HOOP ASSEMBLY			
		90621-01--01	01	RH AFT ATTACHMENT HOOP ASSEMBLY			
QTY	DTY	PART NO.	ITEM	DESCRIPTION	MATERIAL	MATERIAL SPEC	STOCK SIZE
					LIST OF MATERIALS		

APPROVALS		DATE		 AERO DESIGN LTD. 9608A MALVERN, CANADA, ROAD POWELL, HYLER, BC, CANADA, Y8A 6G3 TEL: 854-484-3378 www.aerodesign.ca			
DRAWN:	JEFF CLARKE	30 AUG 2010					
CHECKED:	E. BURDON						
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON:				ROBINSON R44 QUICK RELEASE CARGO BASKET AFT ATTACHMENT HOOP FABRICATION			
DECIMALS		ANGLES		SCALE 1 : 1		REV.	
X.XXX ±0.010		±1/2°		SHEET 1 OF 1 A1		90621	
X.XX ±0.03						1	
X.X ±0.1							

2016-91 x 3

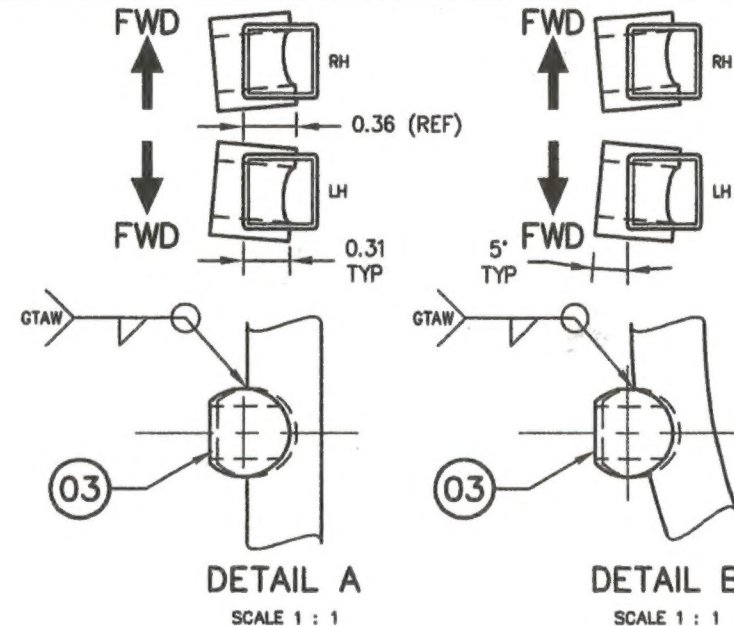
NA - STOCK JC.



01 FORWARD ATTACHMENT HOOP

FRONT VIEW
LEFT HAND SHOWN, RIGHT HAND OPPOSITE

REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE		
1	TITLE BLOCK UPDATED, HEIGHT UPDATED TO MATCH ASSEMBLY DRAWING	BJC	22/05/2014



DETAIL A

SCALE 1 : 1

DETAIL B

SCALE 1 : 1

NOTES

- REMOVE ALL BURRS AND BREAK SHARP EDGES.
- DRILL #30 (0.129) VENT HOLE IN BOTTOM OF HOOP FOR VENTING OF WELD GASES.
- WELDING OF STEEL LUGS TO BE COMPLETED BY GTAW METHOD TO AMS2685C. WELDING ROD SHALL CONFORM TO ER70S-2 OR EQUIVALENT.

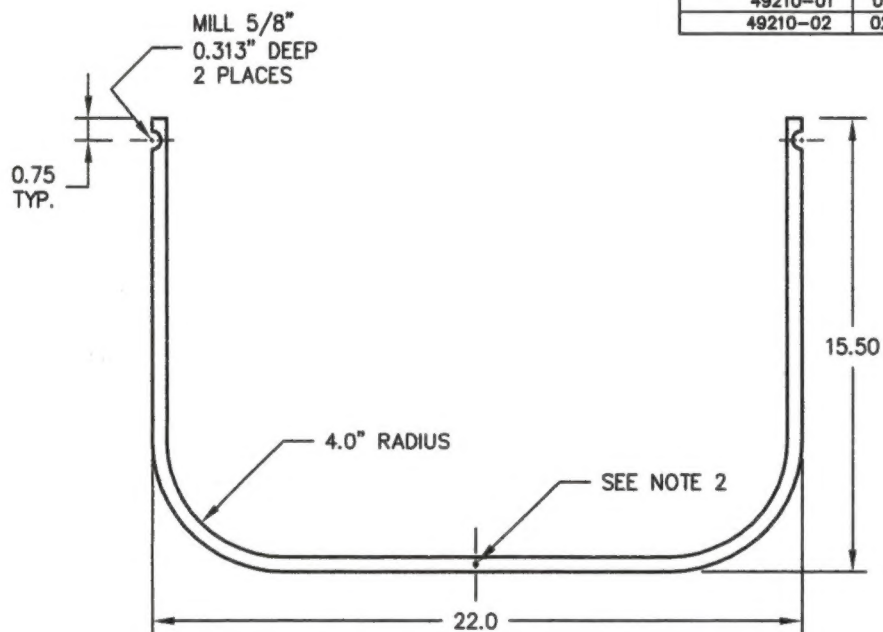
2	69823-02	03	LUG				
	90622-01-02	01	LH FWD ATTACHMENT HOOP	4130 STEEL COND. N	MIL-T-6736	1/2 x 0.035 SQR. TUBE	
	90622-01-01	01	RH FWD ATTACHMENT HOOP	4130 STEEL COND. N	MIL-T-6736	1/2 x 0.035 SQR. TUBE	
01	PART NO.	ITEM	DESCRIPTION	MATERIAL	MATERIAL SPEC	STOCK SIZE	

LIST OF MATERIALS

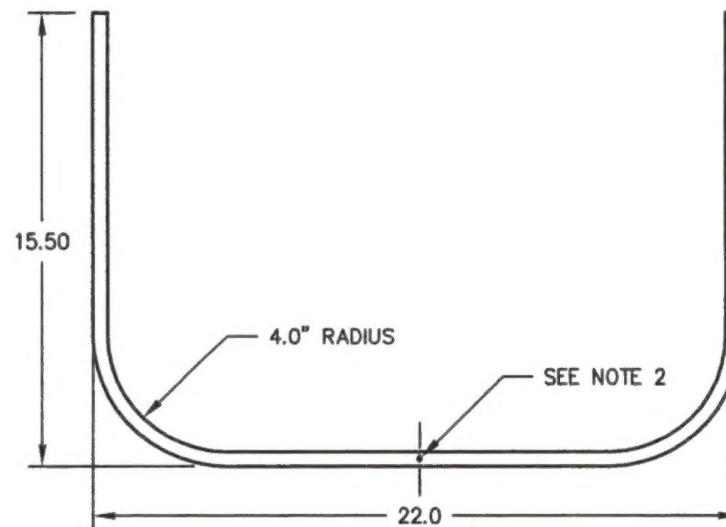
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	DRAWN: JEFF CLARKE	10 APR 2006				
	CHECKED: E. BURGON					
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ON:		ROBINSON R44, R44 II QUICK RELEASE CARGO BASKET FORWARD ATTACHMENT HOOP FABRICATION			
DECIMALS ANGLES						
X.XXX ±0.010 ±1/2°						
X.XX ±0.03						
X.X ±0.1						
SCALE 1 : 5		DWG. SIZE	DWG. NO.	REV.		
SHEET 1 OF 1		LGL	90622	1		

2016-91 x 3

LIST OF MATERIALS					
PART NO.	ITEM	DESCRIPTION	MATERIAL	MATERIAL SPEC.	STOCK SIZE
49210-01	01	END HOOP	4130 SQUARE TUBING	MIL-T-6736	#1/2" x 0.035 WALL
49210-02	02	HOOP	4130 SQUARE TUBING	MIL-T-6736	#1/2" x 0.035 WALL



01 END HOOP



02 HOOP

NOTES:

1. REMOVE ALL BURRS AND SHARP EDGES.
2. DRILL #30 (0.129) VENT HOLE IN BOTTOM OF HOOPS FOR VENTING WELD GASES.

REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
2	TITLE BLOCK UPDATED; VENT HOLE CHANGED	BJC	22/05/2014
1	HOOP HEIGHT CHANGED	BJC	APR 28/04

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APPROVALS	DATE
DRAWN: STEVEN FAHEY	MAY 10/02
CHECKED: E. BURGAIN	MAY 10/02



AERO DESIGN LTD.

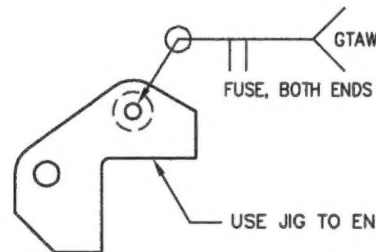
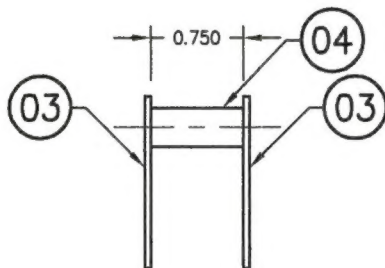
9888A MALASPINA ROAD
POWELL RIVER, BC, CANADA, V8A 0G3
TEL: 604.483.2376 www.aerodesign.ca

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES.
TOLERANCES ON:
DECIMALS ANGLES
X.XXX ±0.010 ±1/2"
X.XX ±0.03
X.X ±0.1

HELICOPTER CARGO BASKET
BASKET COMPONENTS - HOOPS

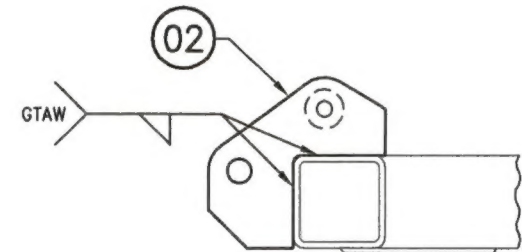
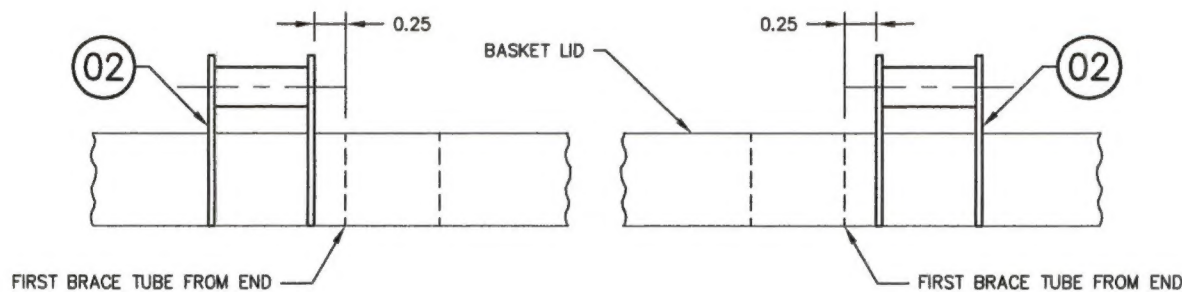
SCALE 1 : 5	DWG. SIZE	DWG. NO.	REV.
SHEET 1 OF 1	LGL	49210	2

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REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE - CREATED FROM 84262 REV. 1	BJC	14/02/2014



USE JIG TO ENSURE BRACKETS ARE ALIGNED

02 HANDLE BRACKET ASSEMBLY



01 LID HANDLE PROVISIONS ASSEMBLY

NOTES:

1. REMOVE ALL BURRS AND SHARP EDGES.
2. WELDING TO BE COMPLETED BY GTAW METHOD TO AMS2685C USING ROD CONFORMING TO ER308L OR EQUIVALENT.

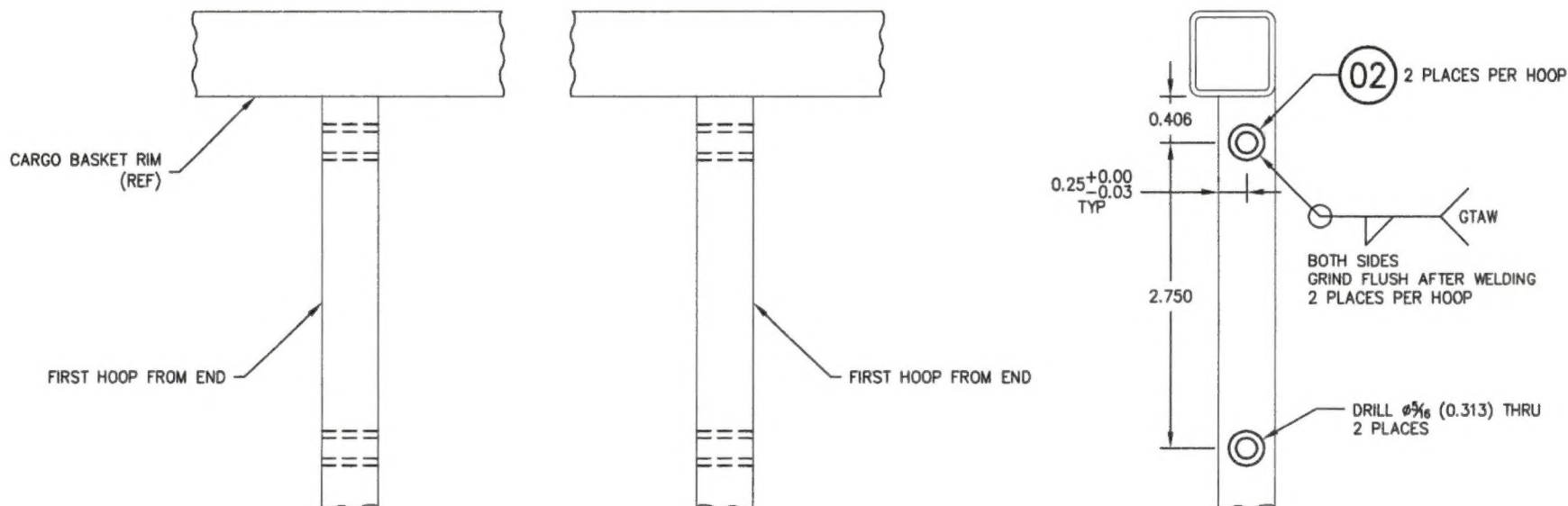
1		36275-02	04	SUPPORT
2		36273-01	03	LID BRACKET
	2	84263-02	02	HANDLE BRACKET ASSEMBLY
		84263-01	01	LID HANDLE PROVISIONS ASSY
02	01	PART NO.	ITEM	DESCRIPTION
QTY	QTY	LIST OF MATERIALS		

APPROVALS		DATE
DRAWN:	JEFF CLARKE	14 FEB 2014
CHECKED:	JASON REKVE	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ON:		
DECIMALS	ANGLES	
X.XXX ±0.010	±1/2°	
X.XX ±0.03		
X.X ±0.1		

 AERO DESIGN LTD. 9888A MALASPINA ROAD POWELL RIVER, BC, CANADA, V8A 0G3 TEL: 804.468.8376 www.aerodesign.ca		HELICOPTER CARGO BASKET LID HANDLE PROVISIONS ASSEMBLY	
		SCALE 1 : 1	REV.
DWG. SIZE	DWG. NO.	REV.	
A3	84263	0	
SHEET 1 OF 1			

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REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE - CREATED FROM 36262	BJC	03/11/2009
1	CHANGE LOCATION OF BUSHINGS	BJC	29/09/2011
2	UPDATED TITLE BLOCK, MOVE LID PROVISIONS TO 84263	BJC	14/02/2014



01 BASKET HANDLE PROVISIONS ASSEMBLY PROVISIONS TO BE INSTALLED IN HOOPS BEFORE ASSEMBLY TO BASKET RIM

NOTES:

1. REMOVE ALL BURRS AND SHARP EDGES.
2. WELDING TO BE COMPLETED BY GTAW METHOD TO AMS2685C USING ROD CONFORMING TO ER70S-2 OR EQUIVALENT.

4	84272-01	02	BUSHING
	84262-01	01	BASKET HANDLE PROV. ASSY
01	PART NO.	ITEM	DESCRIPTION
QTY	LIST OF MATERIALS		

APPROVALS		DATE		
DRAWN: JEFF CLARKE		03 NOV 2009		
CHECKED: E. BURGAIN				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ON:		 <div>AERO DESIGN LTD. 9888A MALASPINA ROAD POWELL RIVER, BC, CANADA, V8A 0G3 TEL: 804.463.2376 www.aerodesign.ca</div>		
DECIMALS ANGLES				
X.XXX ±0.010 ±1/2"				
X.XX ±0.03				
X.X ±0.1				
		HELICOPTER CARGO BASKET BASKET HANDLE PROVISIONS ASSEMBLY		
SCALE 1 : 1		DWG. SIZE	DWG. NO.	REV.
SHEET 1 OF 1		A3	84262	2

CARGO BASKET BODY FABRICATION - COMMON

Work Order: 2016-91

Date Open: 05 JULY 2016

3rd Rim used on WO# 2016-92
DRM Complete
(initial or SCA #)

R44 LH x 32 gc
#3 Cancelled 25 May 2016

AD 73-04 05
AD 73-04 05
AD 73-04 05

1. Rim Assembly – Basket Body

- Cut and fit $\frac{3}{4}$ " x 0.035 material to fit rim jig.
 - 1 or 2 lid prop bushing holes in short tube – refer to drawing
- Record material PO on attached material list.
- Remove writing on tubes with acetone and scotch bright.
- For extra large baskets – drill #30 (0.129) vent holes to vent stringer tubes into rims.
- 94611 (206L/407 XL ski) only – drill for 4 threaded bushings before assembling rim.

AD 73-04 05
AD 73-04 05
AD 73-04 05

2. Weld Rim Assembly.

- Record welding rod PO on attached material list.
- 94611 (206L/407 XL ski) only – weld 4 threaded bushings into inboard rim tube.

AD 73-04 05
AD 73-04 05
AD 73-04 05

3. Inspection

- Rim for complete welds

AD 73-04 05
AD 73-04 05

4. Frame assembly – body

- General
 - Vent holes shall be #30 (0.129), and located inside the structure wherever possible to allow venting of weld gasses through existing holes (i.e. lid prop bushing, hoops, etc.)
- Grind corner welds from step 2 on rim to allow hoops to sit flat.
- Pull required hoops from stock - standard, attachment, handle.
 - If hoops are not in stock see detailed procedure sheet for specific hoop fabrication.
 - Ensure vent hole is located at centre of tube to vent spine tubes.
- Assemble hoops with attachment lug locating jig and hoop spacing jig.
 - Ensure correct order and orientation of hoops. Refer to drawing.
 - Attachment lugs are on inboard side.
 - Handle bracket bushings are on outboard side, second hoop from both ends.
May be on attachment hoops.
 - Run 3/8-24 tap into attachment lugs to ensure clear threads.
 - Bolt attachment lug locating jig to attachment hoops with 3/8-24 bolts.
 - Attach inboard and outboard hoop spacing jigs to all hoops using 1" C-clamps. Raise jigs approximately 2" off table to allow room to weld around hoops.
 - Attach bottom (spine) jig to all hoops using 1" C-clamps along the centre line of the basket. Ensure jig is straight prior to tightening all clamps.
- Cut $\frac{1}{2}$ " x 0.035 material to fit spine jig.
- Cut $\frac{1}{2}$ " x 0.035 material for strut to fit from lower inboard attachment to upper outboard rim.
 - Refer to applicable drawing for position, not required on some baskets.
- Option: Cut $\frac{1}{2}$ " x 0.035 material for front end cutout. Record material PO on attached material list.
- 90611 (R44) only: Cut $\frac{1}{2}$ " x 0.035 material to fit front end structure. Record material PO on attached material list.
- Drill vent holes into attachment hoop and/or rim to vent strut(s) and front end cutout.

- j. Record hoop WOs and material POs on attached material list.
- k. Remove writing on tubes with acetone and scotch bright.
- l. Insert rim assembly into jig and set frame assembly onto rim. Ensure correct orientation of lid prop bushings in rim to frame. Bushing hole must be closer to attachment side.
- m. Align hoops to rim in accordance with drawing. General positions:
 - i. Extra large baskets
 - 1. inboard side of hoops (attachment side) aligns to OUTSIDE of rim
 - 2. outboard side of hoops (handle side) aligns to INSIDE of rim
 - 3. forward and aft hoops align to INSIDE of rim
 - ii. All other baskets
 - 1. inboard side of hoops (attachment side) aligns to INSIDE of rim
 - 2. outboard side of hoops (handle side) aligns to INSIDE of rim
 - 3. forward and aft hoops align to INSIDE of rim, except R44

5. TIG weld frame to rim assembly.

- a. Ensure lug locating jig and hoop locating jigs are in place. Jigs must remain in place for as long as practical during welding.
- b. Strut tubes and front end cutout (see step 4.f. and g.) must be welded in place after the hoops are welded to the rim. Jig(s) must be in place prior to welding strut tubes.
- c. Robinson R44 (90611) requires fitting and welding of forward end after remainder of basket frame is welded. Use jig to support front hoop.
- d. Record welding rod PO on attached material list.

6. Inspection

- a. Frame assembly for complete welds.

7. Mesh assembly.

- a. Pull sheet of expanded mesh from stock. Record material PO on attached material list.
- b. Cut mesh to size for body.
- c. Remove surface rust with scotch-brite.
- d. Bend body mesh – use table with bend markings on top. Lock wheels on table.
 - i. For extra wide baskets only –
 - 1. Set $\frac{3}{4}$ " angle along edge of table under mesh sheet. Set 1.5" square tube on top of mesh aligned with angle on edge of table. Clamp in place with 6" C-clamps.
 - 2. Bend upper edge of sheet just past a cell intersection to make a flange 2.5" - 3.25" wide. Closer to 2.5" is preferred, full cell intersection on flange side at bend is required.
 - 3. Bend down by hand as far as possible, then use a hammer to flatten the bend tight against the angle on the edge of the table.
 - ii. Using markings on table, align sheet to indicated edge.
 - iii. Using markings on table, align 3" tube to required position and clamp tube in place.
 - iv. Bend mesh by hand tightly over tube along length of tube.
 - v. Keeping mesh in place, un-clamp 3" tube, move to other position and clamp tube in place.
 - vi. Bend mesh by hand tightly over tube along length of tube.
- e. Install attachment lug jig onto basket frame.

- f. Ensure end struts are welded in basket frame if required by the drawing.
- g. Insert mesh into basket.
 - i. General
 - 1. Some cells may interfere with correct positioning, especially at the upper corners and around struts. Bend cell(s) in as required, do not cut cells off.
 - 2. Ideally welds will be located on mesh intersections. Shift mesh if possible to minimize welds located off mesh intersections.
 - 3. Ensure mesh reaches all edges of basket BEFORE trimming. Regardless of progress in clamping, remove clamps and shift mesh if required.
 - 4. Ensure cleco clamps are placed from the inside of the basket to allow removal during welding. Cleco clamps may be used from the outside during fitting, but must be removed prior to welding.
 - ii. Extra large baskets only – seat corner of mesh with flange into inboard upper corner of frame. Use C-clamps on edge of flange as required to maintain tight fit.
 - iii. Starting at inboard top edge of basket, clamp mesh to hoop near top rim using cleco clamps onto hoops. For regular size baskets, edge of mesh should sit approximately half way up rim tube.
 - iv. Working down the inboard side, clamp mesh to hoops with cleco clamps. Clamp down into radius of hoop and continue clamping as required to maintain tight fit in corner of hoop. After the corners are tight, two clamps just onto the radius on both ends should be sufficient to hold the corner tight, remove all extra clamps.
 - v. Clamp mesh to spine in at least 1 place per section.
 - vi. Working up the outboard side, clamp the mesh into the radius of hoop and continue clamping as required to maintain tight fit in corner of hoop. After the corners are tight, 2 clamps just onto the radius on both ends should be sufficient to hold the corner tight, remove all extra clamps.
 - vii. Trim upper outboard edge of mesh if required, edge of mesh must be low enough on rim tube to prevent the weld from protruding above the edge of the rim. Some sheets are tapered and may require ½ to 1 cell to be removed over some or all of the length of the basket. De-burr cut edges with a sanding disc on a die-grinder. Straighten cut cells with duck-bill pliers. Clamp mesh near upper edge to hoops with cleco clamps after trimming.
 - viii. Trim ends to land on hoops, at mesh intersections if possible.
- h. Cut mesh to fit ends. Record material PO on attached material list.
 - i. Remove surface rust with scotch-brite.
 - ii. Ensure mesh is cut at intersections where possible.
 - iii. Bend top edge of mesh 1/8"-3/16" down at 45 degrees
 - iv. Cut for front end cutout if required.
- i. 90611 (R44) only: Cut mesh to fit upper forward end. Record material PO on attached material list.
 - i. Remove surface rust with scotch-brite.
 - ii. Ensure mesh is cut at intersections where possible.
 - iii. Bend top edge of mesh 1/4" down at 60 degrees.
 - iv. Fit mesh to front end of basket.

CARGO BASKET BODY FABRICATION - COMMON

AD
73-04
05

AD
73-04
05

Complete
(initial or SCA #)

8. Weld mesh to frame assembly per drawing.

- Ensure lug locating jig is in place prior to welding.
- General welding requirements for all baskets, MIG welding:
 - Every intersection at top edges.
 - Every intersection at ends.
 - First 5 intersections down on hoops, then every second intersection.
 - Every intersection along spine.
 - Extra large baskets – every intersection along corner.
 - Every intersection around ends
 - Every intersection along struts (if applicable)
- Bend and trim cells bent in to fit mesh as required and weld in position.
- Grind high spots off body mesh welds on ends before welding end mesh.
- 90611 (R44) only – weld lid prop bushing (step 9) into rim BEFORE welding upper mesh on forward end of basket assembly.
- Record welding rod PO on attached material list.

AD
73-04
05

AD
73-04
05

9. Weld basket components

- TIG weld lid prop bushing(s), one or two per drawing.
 - Record welding rod PO on attached material list.
 - Record lip prop bushing WO on attached material list.
- TIG weld caps to close top of 1" hoops as applicable.
- 94611 (Bell206L/407 XL ski) only: cut rim over cross tube gap.
 - Cut inboard rim on aft end. Grind flush with hoops.
 - TIG weld caps on open tubes.
 - Record cap material PO on attached material list.
- 95911 (Bell 429) only: placard bracket to forward upper corner of basket.
 - Record welding rod PO on attached material list.
 - Record placard bracket WO on attached material list.

AD
73-04
07

A
73-04
07

10. Clean up

- Grind high spots off mesh welds.
- Tighten mesh using special pliers. Tighten enough to remove "oil canning", where mesh springs in or out. Do not tighten in corners of hoops, mesh will be deformed.
- Drill #9 through lid prop bushing(s). De-burr hole(s).
- Remove surface rust with scotch-brite pad.

AD
73-04
02

AD
73-04
02

11. Final Inspection

To be completed by a different person than the previous steps.

- Basket body assembly for complete welds, and required minimum mesh weld locations.
- Filled vent holes – usually on hoops
- Overall condition and conformity to drawing(s).
 - Hoops for height.
 - Rim for width and length and alignment.
 - Lid prop lugs in correct ends.
 - Fore/aft strut in hoop if required by drawing.
- Material lists complete.

CARGO BASKET BODY FABRICATION - COMMON

Complete
(initial or SCA #)

- e. Tag complete basket body assembly in preparation for powder coating.

12. Powder Coating

- a. Parts are to be powder coated white in accordance with commercial practices.
- b. Record powder coating PO.
- c. Inspect powder coating on receiving.
- d. Tag basket body assembly and place into stock in preparation for assembly.

AD
73-04
02

AD
73-04
02

CARGO BASKET BODY FABRICATION - COMMON

General

These instructions apply to all cargo basket body assemblies. Refer to the following drawings, at the current revision, for dimensions and details:

Bell 206L/407 – Right side only

69811, Revision 3 – Standard Low Mounted Basket

94511, Revision 0 – Extra-Wide Low Mounted Basket

94611, Revision 0 – Extra-Wide Low Mounted Ski Basket

76611, Revision 0 – High Mounted Ski Basket

Options 70404, Revision 2 – Front end cutout – 698

70411, Revision 0 – Front end cutout – 945/946

Eurocopter AS350/AS355 – left or right

77611, Revision 1 – Short Basket

76411, Revision 3 – Medium Basket (left or right)

78411, Revision 2 – Long Basket

94011, Revision 0 – Extra Large (ski) Basket

Options 70406, Revision 2 – Front end cutout – 764/776/784/940

Robinson R44 – left or right

90611, Revision 0 – Standard Basket (left or right)

Bell 206B – right side only

80211, Revision 0 – Short Basket

80311, Revision 0 – Medium Basket

81111, Revision 0 – Long Basket

Options 70406, Revision 2 – Front end cutout – 802/803/811

Bell 429 – right or left

95911, Revision 0 – Standard Basket

Bell Medium – left or right

75111, Revision 0 – Standard Basket

95511, Revision 0 – Extra Large (ski) Basket

Options 70407, Revision 1 – Front end cutout – 751

704, Revision – Front end cutout – 955

MD600

82811, Revision 0 – Standard Basket

Options – Applicable to all models

70403, Revision 5 – Auxiliary Latch

Work Order: 2016-91 x 3 LHMaterial Tracking Sheet
Robinson R44
Basket Body Fabrication

1 of 2

Date Opened: 05 Jun 16
Jul OK

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/NO
	<u>3</u>		<u>90611-01-02</u>	Basket Assembly	(-01 RH) <u>-02 LH</u>	
Step 1				<i>Rim Assembly</i>		
	. 2		--	3/4" Tube - Long Rim (55 5/8")	4130 Steel, 3/4" x 0.035 Sqr. Tube	<u>15072</u>
	. 2		--	3/4" Tube - Short Rim (22.5")	4130 Steel, 3/4" x 0.035 Sqr. Tube	<u>15072</u>
Step 2				<i>Weld Rim Assembly</i>		
	. A/R		--	Welding Rod	ER70S-2 TIG Rod	<u>14005</u>
Step 3				<i>Inspection - Rim</i>	None	
Step 4				<i>Frame Assembly</i>		
	. 2		49210-02	Hoop - standard	4130 Steel, 1/2" x 0.035 Sqr. Tube	<u>15072</u> see attached
	. 1		49210-02	Hoop - with handle provisions	4130 Steel, 1/2" x 0.035 Sqr. Tube	<u>15072</u> see attached
	. 1		90621-01-XX	Aft Attachment hoop		<u>2016-91</u> see attached
	. 1		90622-01-XX	Forward Attachmen Hoop		<u>2014-36/</u>
	. 4		--	1/2" Tube - spine	4130 Steel, 1/2" x 0.035 Sqr. Tube	<u>15072</u>
	. 1		--	1/2" Tube - strut	4130 Steel, 1/2" x 0.035 Sqr. Tube	<u>15072</u>
	. 1		--	1/2" Tube - cross member (21")	4130 Steel, 1/2" x 0.035 Sqr. Tube	<u>15072</u>
Step 5				<i>Weld Frame Assembly</i>		
	. A/R		--	Welding Rod	ER70S-2 TIG Rod	<u>14033</u>
Step 6				<i>Inspection - Frame Assembly</i>	None	
Step 7				<i>Mesh Assembly</i>		
	. 1		--	Mesh (Body - 48" x 56")	3/4-16F Expanded Mild Steel sheet	<u>16038</u>
	. 1		--	Mesh (End - 22" x 15.5")	3/4-16F Expanded Mild Steel sheet	<u>16038</u>
	. 1		--	Mesh (End - 22" x 9")	3/4-16F Expanded Mild Steel sheet	<u>16038</u>
	. 1		--	Mesh (End - 22" x 21")	3/4-16F Expanded Mild Steel sheet	<u>16038</u>

Work Order: 2016-91Date Opened: July 2016Material Tracking Sheet
Robinson R44
Basket Body Fabrication

2 of 2

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/WO
Step 8				<i>Weld Mesh</i>		
	A/R		--	Welding Rod	ER70S-6 MIG Wire	15090
Step 9				<i>Weld Basket Components</i>		
Step 9.a.	1		49215-01	Spacer (Lid prop)	304 Stainless Steel, 1/2" Dia.	2015-84
	A/R		--	Welding Rod	ER308L TIG Rod	14028
Step 9.b.	1		--	Cap	1018 Mild Steel, 0.032" Sheet	9010
	A/R		--	Welding Rod	ER70S-2 TIG Rod	14005
Step 10				<i>Clean Up</i>	None	
Step 11				<i>Inspection - Final Assembly</i>	None	
Step 12				Powder Coating		17010 / 17035

CARGO BASKET LID FABRICATION

Complete
(initial or SCA #)

Work Order: 2016-91

R44 LH x 3 2 JC

Date Open: 05 JULY 2016

#3 Cancelled 25 May 2018 JC

AD
73-04
05

AD
73-04
05

1. Rim Assembly – Basket Lid

- Cut and fit $\frac{3}{4}$ " x 0.035 material to fit rim jig, 45 degree ends.
 - 1 or 2 lid prop bushing holes in short tube – refer to drawing
- Record material PO on attached material list.
- Remove writing on tubes with acetone and scotch bright.

AD
73-04
05

AD
73-04
05

2. Weld Rim Assembly

- Record welding rod PO on attached material list.

AD
73-04
05

AD
73-04
05

3. Inspection

- Rim for complete welds

AD
73-04
05

AD
73-04
05

4. Frame assembly – Lid

- General
 - Vent holes shall be #30 (0.129), and located inside the structure wherever possible to allow venting of weld gasses through existing holes (i.e. lid prop bushing)
- Insert rim from step 2 into jig.
- Cut and fit $\frac{3}{4}$ " x 0.035 material, 21" long, for lid cross members.
- Record material PO on attached material list.
- Remove writing on tubes with acetone and scotch bright.
- Drill vent holes into rim to vent cross members into rim.
- Locate cross members in lid rim. Refer to drawing for spacing of cross members. Clamp cross members with C-clamps to jig.

5. Frame assembly – Lid with optional walkway modification

- Fit cross members to rim in accordance with step 4.
- Attach walkway jig with C-clamps. Ensure correct orientation of rim, refer to drawing.
- Cut $\frac{1}{2}$ " x 0.035 material for walkway stringers to fit between lid cross members. Record material PO on attached material list.
- Drill vent holes into cross members at walkway stringers.
- Align walkway stringers on walkway jig using cleco clamps near both ends of each stringer, and clamp stringer to jig using a C-clamp in the centre.

AD
73-04
05

AD
73-04
05

6. Weld frame assembly.

- Record welding rod PO on attached material list.
- Jigs must remain in place for as long as practical during welding.

AD
73-04
05

AD
73-04
05

7. Inspection

- Frame assembly for complete welds.

CARGO BASKET LID FABRICATION

Complete
(initial or SCA #)

8. Mesh assembly.

Note: 95912 (Bell 429) does not have mesh. Skip to step 10.

- Pull sheet of expanded mesh from stock. Record material PO on attached material list.
- Cut mesh to size for lid.
- Remove surface rust with scotch-brite.
- Ensure lid is prepared for mesh on the correct side.

AD
73-04
05

AD
73-04
05

9. Weld mesh to frame assembly per drawing.

- General welding requirements for all lids:
 - Every intersection on all edges.
 - First 5 intersections along cross members, then every second intersection.
- MIG weld both short sides.
- Clamp lid over spacer at centre of lid to pre-tension mesh.
 - $\frac{3}{4}$ " for lids under 76"
 - 1" (check) for lids over 76"
- Weld remainder of mesh as indicated in a.
- Record welding rod PO on attached material list.

AD
73-04
05

AD
73-04
05

10. Weld lid components.

- Handle brackets, locate in accordance with drawing.
 - Standard location: $\frac{1}{4}$ " outside of last cross member on both ends.
 - Record handle bracket WO and welding rod PO on attached material list.
- Lid prop bushing(s).
 - one or two in accordance with drawing.
 - Record lip prop bushing WO and welding rod PO on attached material list.
- Placard bracket. – not installed on 95912 (Bell 429)
 - Locate on cross member to set bracket in centre bay of lid.
 - Record placard bracket WO and welding rod PO on attached material list.

AD
73-04
05

AD
73-04
05

11. Clean up

- Grind high spots off mesh welds.
- Tighten mesh using special pliers. Tighten enough to remove "oil canning", where mesh springs in or out.
- Straighten lid using frame attached under welding table. Work carefully, avoid excessive force to prevent kinking rim tubes.
- Drill #9 through lid prop bushing(s). De-burr hole(s).
- Drill for lid bumpers using $\frac{1}{4}$ " (#3) centre drill.
 - 3 places for lids under 76"
 - 4 places for lids over 76"
- Remove surface rust with scotch-brite pad.

12. Final Inspection

To be completed by a different person than the previous steps.

- Basket lid assembly for complete welds, and required minimum mesh weld locations.
- Material lists complete.
- Overall condition and conformity to drawing(s).

AD
73-04
05

AD
73-04
05

CARGO BASKET LID FABRICATION

Complete
(initial or SCA #)

13. Powder Coating

- a. Parts are to be powder coated white in accordance with commercial practices.
- b. Record powder coating PO.
- c. Inspect powder coating on receiving.
- d. Tag lid assembly and place into stock in preparation for assembly.

AD
73-04
02

AD
73-04
02

CARGO BASKET LID FABRICATION - COMMON

General

These instructions apply to all cargo basket lid assemblies. Refer to the following drawings, at the current revision, for dimensions and details:

Bell 206L/407 – Right side only

69812, Revision 3 – Standard Low Mounted Basket; Extra-Wide Low Mounted Basket

94612, Revision 0 – Extra-Wide Low Mounted Ski Basket

76612, Revision 0 – High Mounted Ski Basket

Eurocopter AS350/AS355 – left or right

77612, Revision 1 – Short Basket

69812, Revision 3 – Medium Basket (left and right)

78412, Revision 2 – Long Basket

94012, Revision 0 – Extra Large (ski) Basket

Robinson R44 – left or right

90612, Revision 0 – Standard Basket (left or right)

Bell 206B – right side only

80212, Revision 0 – Short Basket

80312, Revision 0 – Medium Basket

81112, Revision 0 – Long Basket

Bell 429 – right or left

95912, Revision 0 – Standard Basket

Bell Medium – left or right

75112, Revision 0 – Standard Basket

95512, Revision 0 – Extra Large (ski) Basket

MD600

82812, Revision 0 – Standard Basket

Options

70405, Revision 3 – Walkway

70402, Revision 1 – Lid Door

Work Order: 2016-91

Material Tracking Sheet

1 of 2

Date Opened: 05 JULY 2016

Robinson R44

Lid Fabrication

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/WO
	<u>3</u>		<u>90612-01-02</u>	Lid Assembly	(-01 RH, -02 LH)	
Step 1				<i>Rim Assembly</i>		
	. 2		--	3/4" Tube - Long Rim (55 5/8")	4130 Steel, 3/4" x 0.035 Sqr. Tube	<u>2013-47/</u>
	. 2		--	3/4" Tube - Short Rim (22.5")	4130 Steel, 3/4" x 0.035 Sqr. Tube	<u>2013-47/</u>
Step 2				<i>Weld Rim Assembly</i>		
	. A/R		--	Welding Rod	ER70S-2 TIG Rod	<u>2013-47/ 14033</u>
Step 3				<i>Inspection - Rim</i>	None	
Step 4				<i>Frame Assembly</i>		
	. 2		--	3/4" Tube - Cross Member (21")	4130 Steel, 3/4" x 0.035 Sqr. Tube	<u>2013-47/</u>
Step 6				<i>Weld Frame Assembly</i>		
	. A/R		--	Welding Rod	ER70S-2 TIG Rod	<u>2013-47/ 14033</u>
Step 7				<i>Inspection - Frame Assembly</i>	None	
Step 8				<i>Mesh Assembly</i>		
	. 1		--	Mesh (lid - 55" x 22")	3/4-16F Expanded Mild Steel sheet	<u>16038</u>
Step 9				<i>Weld Mesh</i>		
	. A/R		--	Welding Rod	ER70S-6 MIG Wire	<u>15059</u>

Work Order: 2016-91

Material Tracking Sheet
Robinson R44
Lid Fabrication

2 of 2

Date Opened: July 2016

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/WO
Step 10				<i>Weld Lid Components</i>		
	. 1	84262	84262-01	Upper Handle Bracket Assembly		2016-54
	. . 4		36273-01	Lid Bracket	321 Stainless, 0.050 Sheet	
	. . 2		36275-02	Support	304 Stainless, 5/16" Rod	
	. A/R		--	Welding Rod	ER308L TIG Rod	14028
	. 1		49216-01	Spacer (Lid prop)	304 Stainless, 1/2" Dia.	2015-84
	. A/R		--	Welding Rod	ER308L TIG Rod	14028
	. 1		36204-10	Placard Bracket	1018 Steel, 0.035" Sheet	2016-119
	. A/R		--	Welding Rod	ER70S-2 TIG Rod	14033
Step 11				<i>Clean Up</i>	None	
Step 12				<i>Inspection - Final Assembly</i>	None	
Step 13				<i>Powder Coating</i>		17010 / 17035



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity: 1

PN: 90622-01-02

Aircraft: Robinson

Model: R44

Description: Forward Mount Hoop, LH

Supplier: Aero Design

Color: N/A

WO#: 2014-36

PO# N/A



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity: 1

PN: 90622-01-02

Aircraft: Robinson

Model: R44

Description: Forward Mount Hoop, LH

Supplier: Aero Design

Color: N/A

WO#: 2014-36

PO# N/A

CARGO BASKET HOOP FABRICATION - 90621

General

These instructions apply to cargo basket attachment hoop 90621-01-XX (-01 right, -02 left). Refer to the following drawings, at the current revision, for dimensions and details:

90621, Revision 0 – Attachment Hoop

84262, Revision 1 – Handle Bracket Assembly

Notes

1. Always bend 1 hoop start to finish to ensure stops and stock length are correct.
2. Always pull with consistent speed through the bend, do not stop during the pull, and do not over-pull once the stop is reached.

Work Order: 2016-91 x 3 LH

Date Open: 05 Jan 16
Jul ok

Complete
(initial or SCA #)

AD	AD	AD
73-04	73-04	73-04
<u>01</u>	<u>01</u>	<u>01</u>

1. ½ Hoop Fabrication – ½" hoop

- a. Cut ½" x 0.035 material to 21.0", square ends.
- b. Record material PO on attached material list.
- c. De-burr cut ends using a sanding disc on a die-grinder or disc sander.
- d. Remove writing on tubes with acetone and scotch bright.
- e. On the hoop bending fixture, set the following stops:
 - i. Upper tube stop: ??"
 - ii. Lower bend stop: 12mm
- f. Slide stock tube through bending die up to upper stop. Rotate bending arm clockwise until tube is secure, ready to bend. Ensure tube remains tight to upper stop.
- g. Slide shim all the way forward on bender to secure tube in die
- h. Pull bending arm clockwise until stop is reached. Pull slowly with consistent pressure.
- i. Check tube bend for square using a hoop jig or carpenters square. Adjust stops if required.
- j. Check for:
 - i. hoop height: 15.5" (Outside to outside)
 - ii. adjust upper stop for height if required

AD	AD	AD
73-04	73-04	73-04
<u>01</u>	<u>01</u>	<u>01</u>

2. ½ Hoop Machining – ½" hoop – 84262-01

- a. Start with ½" half hoop from step 1.
- b. Setup manual milling machine with specific hoop vise jaw. Set XY 0 on far, right edge of jaw (end of hoop).
- c. Drill 2 places, 5/16" (0.313) holes using 5/16" (#4) centre drill through both sides in accordance with drawing. Run at 500 RPM. Apply a few drops of Rapid-Tap cutting oil to each location before drilling.
 - i. locate 0.23" from edge (within tolerance specified on drawing).
- d. Wipe or blow off cutting oil and de-burr with scotch-brite disc on die-grinder.
- e. Tag in process hoop(s) and place into stock.

AD	AD Complete	AD
73-04	73-04	73-04
07	07	07

3. ½ Hoop Fabrication – 1" hoop

- Cut 1" x 0.065 material to 32.0", both end square.
- Record material PO on attached material list.
- De-burr cut ends using a sanding disc on a die-grinder or disc sander.
- Remove writing on tubes with acetone and scotch bright.
- On the hoop bending fixture, set the following stops:
 - Upper tube stop: ??
 - Lower bend stop: ??
- Slide stock tube through bending die up to upper stop. Rotate bending arm clockwise until tube is secure, ready to bend. Ensure tube remains tight to upper stop.
- Slide shim all the way forward on bender to secure tube in die
- Using a long snipe tube, pull bending arm clockwise until stop is reached. Pull slowly with consistent pressure.
- Check tube bend for angle using hoop jig. Adjust stops if required.
- Check for:
 - hoop height 16"
 - adjust upper stop for height if required
 - length to allow 60 degree cut.
- Using hoop jig, mark for 60 degree cut on bottom end. Cut to length.
- De-burr cut end using a sanding disc on a die-grinder or disc sander.

AD	AD	AD
73-04	73-04	73-04
05	05	05

4. ½ Hoop Machining – 1" hoop

- Start with 1" ½ hoop as stock.
- Setup manual milling machine with standard steel vise jaws. Insert hoop into vise flat on bottom of vise. Set X 0 on edge of hoop (end of hoop). Shift X along hoop 0.75" and set X 0. Set stop against end of tube. Rotate milling head 5 degrees in or out as required for right or left side.
- Drill two places, 5/8" (0.625) holes using 5/8" (#7) centre drill through both sides in accordance with drawing. Apply a few drops of Rapid-Tap cutting oil to each location before drilling. Ensure edge of hole to edge of tube is 0.23" as indicated on drawing.
- Wipe or blow off cutting oil and de-burr with scotch-brite disc on die-grinder.
- Set tube in vise with 60 degree end on right.
- Using ½" coated carbide end mill, mill slot 2.25" deep (edge to edge, 2.0 edge to centre). Apply a bead of Rapid-Tap cutting oil along cut line before milling.
- Wipe or blow off cutting oil and de-burr with scotch-brite disc on die-grinder.
- Tag in process hoop(s) and place into stock.

AD	AD	AD
73-04	73-04	73-04
07	07	07

5. Joint Preparation

- Set 1" hoop in hoop jig. Insert ½" hoop into 1" hoop, against side stop of jig. Mark slot location in 1" hoop onto ½" hoop. Trim ½" hoop with vertical bandsaw if required, and shape to match slot with disc sander.

AD	AD	AD
73-04	73-04	73-04
05	05	05

6. Welding – Lugs

- Insert two 90621-05 lugs into holes in 1" hoop. Set short side to 0.06" above surface of tube. Attach 11" spacing jig with 3/8-24 bolts to lugs.
- TIG weld all around outside of lugs. 2 places.

- c. Grind lugs flush with inside of tube.
- d. TIG weld all around inside of lugs. 2 places.
- e. Record lug and welding rod PO/WO on attached material list.

AD	AD	AD
73-04	73-04	73-04
05	05	05

7. Welding – Handle Bushings – 84262-01

- a. Insert 84271-01 bushings into ½" hoop prepared in step 2. above.
- b. TIG weld bushing both sides, 2 bushings per hoop.
- c. Record bushing and welding rod PO/WO on attached material list.

AD	AD	AD
73-04	73-04	73-04
05	05	05

8. Welding – Hoop Assembly

- a. Insert 1" hoop from step 6 and ½" hoop from step 7 into hoop jig. Seat ½" hoop into slot in 1" hoop.
- b. Tack weld hoops together, minimum 4 places, to hold hoop together to complete welds out of jig.
- c. TIG weld around ½" hoop in slot.
- d. Cap ½" – 1" tube joint with 76423-04 cap. TIG weld around cap.
- e. Record cap and welding rod PO/WO on attached material list.

AD	AD	AD
73-04	73-04	73-04
07	07	07

9. Finishing and Inspection

- a. Run 3/8-24 tap through welded lugs.
- b. Grind inside surfaces flush at lugs and slot in 1" tube.
- c. Inspect hoop for conformity to drawing.
- d. Tag complete and inspected hoop(s) and place into stock.

CARGO BASKET HOOP FABRICATION - 84262

General

These instructions apply to all cargo basket hoops that require handle bracket provisions. Refer to the following drawings, at the current revision, for dimensions and details:

Handle Provisions – Common to all baskets
84262, Revision 1 – Handle Bracket Assembly

Work Order: 2016-91

Date Open: 05 JULY 2016

Complete
(initial or SCA #)

AD	AD	AD
73-04	73-04	73-04
<u>01</u>	<u>01</u>	<u>01</u>

1. Handle Bushings – Preparation – 84262-01

Required in locations where handle brackets will be installed.

- Start with stock hoop or half hoop as required for specific basket assembly.
- Setup manual milling machine with specific hoop vise jaw. Set XY 0 on far, right edge of jaw (end of hoop).
- Drill 2 places, 5/16" (0.313) holes using 5/16 (#4) centre drill through both sides in accordance with drawing. Apply a few drops of Rapid-Tap cutting oil to each location before drilling.
 - locate 0.23" from edge (within tolerance specified on drawing).
- Wipe or blow off cutting oil and de-burr with scotch-brite disc on die-grinder.
- Tag in process hoop(s) and place into stock.

AD	AD	AD
73-04	73-04	73-04
<u>05</u>	<u>05</u>	<u>05</u>

2. Handle Bushings – Welding – 84262-01

- Insert 84271-01 bushings into hoop prepared in step 2. above.
- TIG weld bushing both sides, 2 bushings per hoop.
- Record bushing and welding rod PO/WO on attached material list.
- Tag in process hoop(s) and place into stock.

AD	AD	AD
73-04	73-04	73-04
<u>01</u>	<u>01</u>	<u>01</u>

3. Handle Bushings – Finish – 84262-01

- De-burr welded bushings.
- Inspect hoop for conformity to drawing.
- Tag complete and inspected hoop(s) and place into stock.



Aero Design Ltd.

AMF 73-04

9888 A Malaspina Rd.

Powell River, BC

Canada

V8A 0G3

Complete Fabrication Instructions

This sheet is designed to assist in the fabrication of Aero Design products in accordance with the company Manufacturing Policy Manual, the Canadian Aviation Regulations and other applicable technical documentation.

The reference column of the following table is for reference unless a specific instruction is called out.

The initial columns serve one column per component fabricated on the applicable work order.

Nomenclature: ^{206L} ~~AS350~~ Quick Release Cargo Basket Hoop

Work Order #: 2016-91

Number of Units: 6

Model	Requirements	Reference	Initial				
AS350	Review LOEP to ensure most current technical specifications	N/A	DB	DB	DB	DB	DB
AS350	Cut a piece of material to 48 3/16" ^{48 1/8"} 90° ends	N/A	DB	DB	DB	DB	DB
AS350	Cut one end at 90 degrees and the opposite end at 16 degrees. ^{DB}	N/A					
AS350	At the 90 degree end measure 12.5 ^{10 1/2"} and mark. Bend at that mark, set stop at 103 deg. ^{both ends}	N/A	DB	DB	DB	DB	DB
AS350	At the longest point of the 16 degree end measure 14 1/4" ^{DB} and mark. Bend at that mark, set stop at 85 deg.	N/A					

Post Fabrication Inspection

Inspect components to ensure conformity to the applicable design data.

Signature: JH Ceh.

Licence Number or SCA: AD02

Date: 29 MAR 2017

↑ IS THIS NEEDED? J.

Work Order: 2016-91Material Tracking Sheet
Robinson R44
Hoops Fabrication

1 of 2

Date Opened: 05 JULY 2016

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/WO
Step 1	<u>26</u>	<u>QC</u>	49210-02	Hoop - standard	4130 Steel, 1/2" x 0.035 Sqr. Tube	<u>15072</u>
Step 1	<u>13</u>	<u>QC</u>	49210-02	Hoop - with handle provisions	4130 Steel, 1/2" x 0.035 Sqr. Tube	<u>15072</u>
Step 2				Welding		
	. 2	84262	84272-01	Bushing	4130 Steel, 5/16" x 0.058 Rnd. Tube	
	. A/R		--	Welding Rod	ER70S-2	<u>14005</u>
Step 3				Inspection	None	
Step 1	<u>13</u>	<u>QC N/A STOCK</u>	90622-01-02	Hoop - attachment	(-01 RH, -02 LH)	
	. 1		--	1/2" Tube - hoop	4130 Steel, 1/2" x 0.035 Sqr. Tube	<u>15072 N/A</u>
Step 2				Welding		
	. 2		69823-02	Lug	1018 Steel, 5/8" Rod	
	. A/R		--	Welding Rod	ER70S-2	<u>14005 N/A</u>
Step 3				Finishing and Inspection	None	

Work Order: 2016-91

Material Tracking Sheet
Robinson R44
Hoops Fabrication

2 of 2

Date Opened: 05 JULY 2016

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/WO
	<u>3</u>		<u>90621-01-02</u>	Hoop - attachment (aft)	(-01 RH, -02 LH)	
Step 1				<i>1/2 Hoop Fabrication - 1/2" hoop</i>		
	.1		--	1/2" Tube - hoop	4130 Steel, 1/2" x 0.035 Sqr. Tube	<u>15072</u>
Step 2				<i>Machining</i>	<i>None</i>	
Step 3				<i>1/2 Hoop Fabrication - 1" hoop</i>		
	.1		--	1" tube - hoop	4130 Steel, 1" x 0.065 Sqr. Tube	<u>16037</u>
Step 4				<i>Machining</i>	<i>None</i>	
Step 5				<i>Joint Preparation</i>	<i>None</i>	
				<i>Welding</i>		
Step 6	.2		90621-05	Lug	1018 Mild Steel, 5/8" Dia.	<u>12056</u>
Step 7	.2	84262	84272-01	Bushing	4130 Steel, 5/16" x 0.058 Rnd. Tube	<u>2016-134</u>
Step 8	.1		76423-04	Cap	1018 Mild Steel, 0.050" Sheet	<u>15035</u>
	A/R		--	Welding Rod	ER70S-2	<u>14005</u>
Step 9				<i>Finishing and Inspection</i>	<i>None</i>	



Aero Design Ltd.

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Phone: 604-483-2376 Fax: 604-483-2372 E-mail: info@aerodesign.ca

Nomenclature: R44 Basket body F/H AMF 73-04
No. of pieces: 1
Manufacturer: Aero Design Ltd.
Part No.: 90611-01 Serial/Batch No.: NA
TTSN: NA TSO: NA Rem.: NA
Work Order No.: 2016-91-02
Remaining Tasks to be Performed: prep for powder,
powder coat. ✓ ✓ DB
Signature: David Marty
Date: March 27/2017 Lic. No. / SCA AD-05

Form# 20.E.03

Rev. 1 24 April 2014

In Process



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AMF 73-04

In Process

Remarks

INSPECTED 30 MAR 2017 JC

GREEN TAG ISSUED 11 APR 2017 DK



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Phone: 604-483-2376 Fax: 604-483-2372 E-mail: info@aerodesign.ca

AMF 73-04

Nomenclature: R44 Lid L/H No. of pieces: 1

Manufacturer: Aero Design Ltd.

Part No.: 90612-01 Serial/Batch No.: NA

TTSN: NA TSO: NA Rem.: NA

Work Order No.: 2016-91-02

Remaining Tasks to be Performed: Prep for powder,
powder coat. ✓

Signature: [Signature]

Date: March 27/2017 Lic. No. / SCA AD-05

In Process



Aero Design Ltd.

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AMF 73-04

In Process

Remarks

Insp for powder 30 Mar 17 OK

GREEN TAG ISSUED 11 APR 2017

OK